

In the Claims

Please cancel claims 45 and 46.

Please amend claims 43 and 44. Following is a clean version of the amended claims and a clean version of all the pending claims. In addition, a marked version showing the changes to the amended claims follows the Remarks section.

Clean Version Of Amended Claims

43. (thrice amended) A method for forming an interconnect for a semiconductor die having a contact location, comprising:

providing a substrate;

forming a contact member on the substrate comprising a base, a pillar and a projection configured to penetrate the contact location to a limited penetration depth;

providing a separate multi layered tape comprising a polymer film and a metal conductor on the film;

attaching the tape to the substrate with at least a portion of the conductor located proximate to the contact member; and

electrically connecting the contact member to the conductor by depositing a conductive adhesive material on the contact member and on the conductor configured to form an expansion joint therebetween.

44. (twice amended) The method of claim 43 wherein the conductor has an opening therein aligned with the contact member and the conductive adhesive material is deposited in the opening.

Clean Version Of All Pending Claims

34. (twice amended) A method for fabricating an interconnect for a semiconductor die having a contact location comprising:

providing a substrate;

forming a raised contact member on the substrate at least partially covered with a conductive layer and configured to electrically contact the contact location;

providing a separate polymer film having a conductor thereon;

attaching the polymer film to the substrate with at least a portion of the conductor located proximate to the contact member; and

forming a conductive material on the substrate separate from the conductive layer and the conductor in electrical communication with the conductive layer and the conductor and configured to provide an expansion joint between the contact member and the conductor.

35. (twice amended) The method of claim 34 wherein the conductor comprises a copper foil laminated to the polymer film.

36. (twice amended) The method of claim 34 wherein the conductive material comprises a conductive adhesive material.

37. (twice amended) The method of claim 34 wherein the conductive material comprises a solder material.

38. (twice amended) A method for fabricating an interconnect for a semiconductor die having a plurality of contact locations, comprising:

providing a substrate;

forming a plurality of contact members on the substrate configured to electrically contact the contact locations;

providing a tape comprising a polymer film and a plurality of conductors on the film including a plurality of openings configured for placement on the contact members;

attaching the tape to the substrate with the contact members projecting through the openings; and

depositing a conductive material in the openings in electrical communication with the contact members and the conductors and configured to provide expansion joints therebetween.

39. (twice amended) The method of claim 38 wherein the forming the contact members step comprises etching the substrate to form pillars and then depositing conductive layers on the pillars.

40. (twice amended) The method of claim 38 wherein the conductive material comprises a conductive adhesive material.

41. (twice amended) The method of claim 38 wherein the conductive material comprises a solder material.

42. (twice amended) The method of claim 38 wherein the conductors comprise a metal foil laminated to the polymer film.

43. (thrice amended) A method for forming an interconnect for a semiconductor die having a contact location, comprising:

providing a substrate;

forming a contact member on the substrate comprising a base, a pillar and a projection configured to penetrate the contact location to a limited penetration depth;

providing a separate multi layered tape comprising a polymer film and a metal conductor on the film;

attaching the tape to the substrate with at least a portion of the conductor located proximate to the contact member; and

electrically connecting the contact member to the conductor by depositing a conductive adhesive material on the contact member and on the conductor configured to form an expansion joint therebetween.

44. (twice amended) The method of claim 43 wherein the conductor has an opening therein aligned with the contact member and the conductive adhesive material is deposited in the opening.

47. (twice amended) The method of claim 43 wherein the attaching the tape to the substrate step comprises forming an adhesive layer between the tape and the substrate.

48. (twice amended) A method for forming an interconnect for a semiconductor die having a bumped contact location, comprising:

providing a substrate;

forming a depression in the substrate sized to retain the bumped contact location;

covering at least a portion of the depression with a conductive layer;

providing a separate conductor having an opening therein; and

attaching the conductor to the substrate with the opening surrounding the depression, and the conductor in electrical communication with the conductive layer and electrically insulated from the substrate.

49. (twice amended) The method of claim 48 wherein the attaching step comprises forming an electrically insulating adhesive layer between the conductor and the substrate.

50. (twice amended) The method of claim 48 wherein the conductor comprises a metal foil attached to a polymer film.

51. (twice amended) The method of claim 48 wherein the attaching the conductor step comprises forming an adhesive layer between the conductor and the substrate.

68. (amended) A method for fabricating an interconnect for a semiconductor die having a contact location, comprising:

providing a substrate;

forming a plurality of contact members on the substrate comprising conductive layers configured to electrically contact the contact locations;

providing a separate polymer film having a plurality of conductors thereon with a plurality of openings configured for placement on the contact members;

attaching the tape to the substrate with the openings substantially enclosing the contact members; and

depositing a conductive material in the openings in electrical communication with the conductive layers and the conductors configured to form expansion joints therebetween.

69. (amended) The method of claim 68 wherein the contact members comprise raised portions of the substrate at least partially covered by the conductive layers.

70. (amended) The method of claim 68 wherein the contact members comprise depressions in the substrate at least partially covered by the conductive layers.

71. (amended) A system for testing a semiconductor die having a contact location comprising:

a temporary package for the die; and

an interconnect on the package for establishing temporary electrical communication with the die;

the interconnect comprising:

a substrate,

a contact member comprising a conductive layer configured to electrically contact the contact location;

a multi layered tape bonded to the substrate comprising a polymer film and a conductor on the polymer film; and

a conductive material on the substrate separate from the conductive layer and the conductor in electrical communication with the conductive layer and the conductor and configured to form an expansion joint therebetween.

72. (amended) The system of claim 71 wherein the conductor comprises a metal foil attached to the polymer film.

73. (amended) The system of claim 71 wherein the conductive material comprises a conductive adhesive material or a solder material.

74. (amended) A system for testing a semiconductor die having a bumped contact location comprising:

a temporary package for the die; and

an interconnect on the package for establishing temporary electrical communication with the die;

the interconnect comprising:

a substrate;

a depression in the substrate configured to retain the bumped contact location;

a conductive layer at least partially covering the depression;

a separate tape attached to the substrate comprising a polymer film and a conductor on the polymer film with an opening substantially surrounding the depression; and

a conductive material on the substrate separate from the conductor and the conductive layer electrically connecting the conductive layer and the conductor.
